IN THE CLAIMS:

1. (Withdrawn) A flow through gas separator assembly, associated with a source of fluid, comprising:

   A) an inlet end, disposed to receive fluid from the fluid source; and

   B) a conduit component coupled with said inlet end, for conveying the fluid, said conduit component having walls comprised substantially of a porous, hydrophobic material, that defines a tortuous path therethrough

2. (Withdrawn) The gas separator assembly as defined in claim 1, further comprising:

   an outlet end coupled with said conduit, said outlet end including an end cap member having a flow limiting orifice that generates back pressure within fluid traveling in said conduit in such a manner that said fluid is pushed along said hydrophobic walls into said tortuous path whereby gases contained within said fluid are separated out and released from said fluid.

3. (Withdrawn) The gas separator assembly as defined in claim 2 further comprising,

   a duct coupled to said conduit on an outer side of said walls of said conduit to capture said gas that is separated from said fluid.

4. (Previously Presented) A gas separator assembly for use with a direct oxidation fuel cell that includes a membrane electrode assembly having a protonically-conductive membrane electrolyte, with a catalyst disposed in proximity to the membrane electrolyte, said membrane having an anode face and a cathode face, and an anode chamber being defined within said cell contiguous to said anode and a cathode chamber being defined within said cell contiguous to said cathode, and

when a fuel is introduced into the anode chamber, electricity-generating reactions occur in which anodically generated carbon dioxide, electrons and protons are produced and when supplied with oxygen, cathodically-generated water is produced, the gas separator assembly, comprising:

A) an inlet end coupled with said anode chamber to receive anode effluent including unreacted fuel and water and carbon dioxide; and

B) a conduit component coupled with said inlet end in to which said anode effluent is conveyed, said conduit having walls comprised substantially of a porous, hydrophobic material, and defining a tortuous path exiting said conduit, whereby carbon dioxide is separated out from said anode effluent.

5. (Previously Presented) The gas separator assembly as defined in claim 4, further comprising:

an outlet end having a cap member disposed within the outlet end and said cap member having a flow limiting orifice to generate back pressure within said anode effluent traveling in said conduit component, whereby anode effluent under back pressure is pushed against the walls of said conduit and thereby into said tortuous path, the separate out carbon dioxide from said anode effluent.

6. (Original) The gas separator assembly as defined in claim 4 further comprising:

capture duct coupled with said conduit component for receiving said carbon dioxide separated from said anode effluent.

7. (Previously Presented) The gas separator assembly as defined in claim 4 wherein said conduit component is U-shaped, whereby carbon dioxide is separated from said anode effluent regardless of orientation of said assembly.

8. (Previously Presented) The gas separator assembly as defined in claim 4 wherein

said conduit component has a bend in it such that it is formed to be coupled with said anode chamber, whereby carbon dioxide is separated from said anode effluent regardless of orientation of said assembly.

9. (Previously Presented) The gas separator assembly as defined in claim 4 wherein said conduit component is coiled, whereby carbon dioxide is separated from said anode effluent regardless of orientation of said assembly.

10. (Previously Presented) The gas separator assembly as defined in claim 4 wherein said outlet end is tapered to form a cone-like shape, whereby carbon dioxide is separated from said anode effluent regardless of an orientation of said assembly.

11. (Previously Presented) The gas separator assembly as defined in claim 5 further comprising

at least one of a T-junction fitting and a tube-in-tube fitting coupled to said conduit component to capture said carbon dioxide separated from said anode effluent.

12. (Original) The gas separator assembly as defined in claim 4 further comprising:

a plurality of said conduit components placed in series along an associated outer duct, said outer duct having openings therein for release and capture of said carbon dioxide.

13. (Previously Presented) The gas separator assembly as defined in claim 5 further comprising

a catalyst applied to the exterior aspect of the gas separator assembly for oxidizing any methanol vapor that is separated out of said anode effluent with said carbon dioxide.

14. (Previously Presented) The gas separator assembly as defined in claim 4 wherein the gas separator assembly is comprised of a plurality of fuel cells, each fuel cell having a membrane electrode assembly, and wherein said plurality of fuel cells are connected in a planar design.

15. (Previously Presented) The gas separator assembly as defined in claim 4 wherein the gas separator assembly is comprised of a plurality of fuel cells, each fuel cell having a membrane assembly, and wherein said plurality of fuel cells are connected in a stacked design.

16. (Original) A gas separation apparatus for use with a direct oxidation fuel cell that includes a membrane electrode assembly having a protonically-conductive membrane electrolyte, with a catalyst disposed thereupon, said membrane having an anode face and a cathode face, and an anode chamber being defined within said cell contiguous to said anode and a cathode chamber being defined within said cell contiguous to said cathode, and when a fuel is introduced into the anode chamber, electricity-generating reactions occur in which anodically generated carbon dioxide, electrons and protons are produced and when supplied with oxygen, cathodically-generated water is produced, the gas separator assembly, comprising:

(A) means for introducing anodic effluent from the anode chamber of the fuel cell;

(B) means for conveying anodic effluent from said anode chamber along a hydrophobic, tortuous path;

(C) means for limiting flow out of said conveying means to create backpressure within said conveying means whereby carbon dioxide is separated out from said anode effluent as said anode effluent is conveyed along said hydrophobic tortuous path.

17. (Original) The gas separation assembly as defined in claim 16 wherein

said means for conveying is a conduit shaped to conform to an associated fuel cell housing.

18. (Original) The gas separation assembly as defined in claim 16 further comprising means for capturing carbon dioxide separated from said anode effluent.

19. (Original) The gas separation assembly as defined in claim 16 wherein said means for capturing said carbon dioxide includes a T-junction.

20. (Original) The gas separation assembly as defined in claim 16 wherein said means for capturing said carbon dioxide includes a tube-in-tube assembly.

21. (Original) A method of separating carbon dioxide from an anode effluent produced in a direct oxidation fuel cell that includes a membrane electrode assembly having a protonically-conductive membrane electrolyte, with a catalyst disposed thereupon, said membrane having an anode face and a cathode face, and an anode chamber being defined within said cell contiguous to said anode and a cathode chamber being defined within said cell contiguous to said cathode, and when a fuel is introduced into the anode chamber, electricity-generating reactions occur in which anodically generated carbon dioxide, electrons and protons are produced and when supplied with oxygen, cathodically-generated water is produced, the gas separator assembly, the method including the steps of:

(A) introducing anodic effluent from the anode chamber of the fuel cell;

(B) conveying anodic effluent from said anode chamber along a hydrophobic, tortuous path;

(C) limiting flow out of said conveying means to create backpressure within said conveying means whereby carbon dioxide is separated out from said

anode effluent as said anode effluent is conveyed along said hydrophobic tortuous path.

22. (Withdrawn) The gas separator assembly as defined in claim 2 wherein said end cap of said outlet end is comprised substantially of hydrophilic material.

23. (Previously Presented) The gas separator assembly as defined in claim 5 wherein said end cap of said outlet is comprised substantially of hydrophilic material.